

STATE OF NEVADA

BRIAN SANDOVAL
Governor

MICHAEL J. WILLDEN
Director



RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, M.D.
State Health Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
HEALTH DIVISION
PUBLIC HEALTH AND CLINICAL SERVICES

May 20, 2011

MEMORANDUM

TO: Francis Barron, Chairperson
State Board of Health

FROM: Richard Whitley, MPH, Secretary
State Board of Health

RJ

Re: Case #646, Ms. Julie Scott: Request for a Variance to NAC 444.790(1), "Lot Size," and NAC 444.792(2), "Location."

NAC 444.790(1) states: "A minimum area of 1 acre (43,560 square feet), including public streets and alleys or other public rights-of-way, lands or any portion thereof abutting on, running through or within a building site, is required for the installation of an individual sewage disposal system on a lot served by a well."

NAC 444.792(2) states: "The minimum horizontal separations that must be maintained between the perimeter of the components of an individual sewage disposal system and the following features are:

Minimum horizontal distance, in clear, required from:	Septic tank	Disposal field (shallow)
Water supply wells (sealed to 50 feet)	100'	100'

STAFF REVIEW

A variance request was received by the Health Division on May 11, 2011 from Ms. Julie Scott who is requesting to install a private well (sealed to 50 feet) on her property with a horizontal separation of 70 feet from the existing septic system rather than 100 feet as required in NAC 444.792(2). The existing system and the proposed well would be located on two adjacent lots with a combined area of less than 1 acre. NAC 444.790(1) requires a minimum of 1 acre for a septic system and private well on the same property.

According to a review of past variance records, the State Board of Health has not received any similar variance requests.

Ms. Julie Scott's residence is located at 500 Reno Highway in Hazen, NV. Hazen is a rural community located in Churchill County. All other lots within the community are served by private wells and individual sewage disposal systems. Hazen does not have a community water or sewer system. The local reservoir has dried up due to the shutdown of the canal that fed the water source. Water chemistry reports from the Nevada State Health Laboratory indicate that the well water is not suitable for drinking due to the high amount of Arsenic present. Ms. Julie Scott states that she has always purchased drinking water; however, she has not been able to conduct basic living needs such as flushing toilets, taking showers, and washing dishes since the shutdown of the canal took place.

INTENT OF THE REGULATION

NAC 444.790(1) requires a minimum of 1 acre to have an individual sewage disposal system for a property that is served by a private well. The intent of this regulation is to prevent excessive loading of the groundwater with effluent produced from septic systems. The regulation requires the minimum space of 1 acre to ensure that the density of these systems in a given area will not affect the public health. The Environmental Health Staff of the Nevada State Health Division conducted an area visit to calculate the number of septic systems per acre of the surrounding area in Hazen. The number of septic systems per acre was calculated to be 0.05; this is well below the 1 septic system per 1 acre requirement of the above regulation.

NAC 444.792(2) requires a minimum horizontal separation of 100 feet from the septic system components to the private well. The intent of this regulation is to protect the public health by provide enough horizontal distance between the septic system and private well to prevent effluent from traveling horizontally and reaching the well below the well casing. The Environmental Health Staff of the Nevada State Health Division acquired well drilling logs of the surrounding properties for review. According to the information provided in these reports the static water level is an average of 12.4 feet below ground level. Ms. Julie Scott is requesting to install a private well less than 100 feet from the existing septic system; however, the effluent discharge is likely to reach the groundwater before the 50 foot seal on the well.

DEGREE OF RISK TO PUBLIC HEALTH

There is no risk to public health. Relatively low density of septic systems and a high static water level in the area will preclude excessive loading and contamination of the groundwater.

EXCEPTIONAL AND UNDUE HARDSHIP

Ms. Julie Scott states that strict application of the regulations noted in this memorandum would make her property unusable as a residential property. Ms. Scott has owned and lived at this residence for over 20 years. Denial of the variance application would require Ms. Julie Scott to abandon her home.

PUBLIC COMMENT RECEIVED

Notice of the hearing is scheduled to be published in the Nevada Appeal on or before May 23, 2011. The Health Division is not aware of any objections to this variance by any local authorities and there has not been any public comments received to date.

STAFF RECOMMENDATION

Staff recommends the State Board of Health to approve Case #646, Julie Scott's request for a variance to NAC 444.790(1), "Lot Size" and NAC 444.792(2), "Location."

PRESENTER

Barrett Evans, Environmental Health Specialist, Public Health and Clinical Services

Enclosures

Case # 646

687-7537

NEVADA STATE BOARD OF HEALTH
NEVADA STATE HEALTH DIVISION
4150 Technology Way, Suite 300
CARSON CITY, NV 89706

APPLICATION FOR VARIANCE

Please check the appropriate box that pertains to the NAC for which you are requesting a variance.

☐

Division Administration
(NAC 439, 441A, 452, 453A, & 629)

☐

Health Care Quality & Compliance
(NAC 449, 457, 459 & 652)

☐

Child, Family & Community Wellness
(NAC 392, 394, 432A, 439, 441A, & 442)

☐

Health Statistics, Planning &
Emergency Response
(NAC 440, 450B, 452, 453, 453A, & 695C)

☒

Public Health: Clinical Services
Frontier and Rural Health Services
(NAC 211, ~~444~~, 446, 447, 583, & 585)

Date: 5/11/11

Name of Applicant: Julip Scott Phone: 775-861-3592

Mailing Address: 500 Reno Hwy

City: Hazen State: NV Zip: 89408

We do hereby apply for a variance to chapter/section _____ of the Nevada
Administrative Code (NAC). (For example: NAC 449.204)

Title of section in question: 444.790 LOT SIZE 444.792 LOCATION

Statement of existing or proposed conditions in violation of the NAC:

I need to drill a well and it is only 70 feet from
SEPTIC (OPERATE EXISTING SEPTIC SYSTEM) LESS THAN 100'
FROM A SEALED WELL. LOT SIZE IS LESS THAN MINIMUM
1 ACRE FOR WELL AND SEPTIC SYSTEM.

Date of initial operation (if existing): 1989

ATTENTION: Please read this section closely. Your request for variance will be examined against these criteria:

Any person who, because of unique circumstances, is unduly burdened by a regulation of the State Board of Health and thereby suffers a hardship and the abridgement of a substantial property right may apply for a variance from a regulation. (NAC 439.200(1))

1. The State Board of Health will grant a variance from a regulation only if it finds from the evidence presented at the hearing that:

(a) There are circumstances or conditions which:

- (1) Are unique to the applicant;
- (2) Do not generally affect other persons subject to the regulation;
- (3) Make compliance with the regulation unduly burdensome; and
- (4) Cause a hardship to and abridge a substantial property right of the applicant; and

(b) Granting the variance:

- (1) Is necessary to render substantial justice to the applicant and enable him to preserve and enjoy his property; and
- (2) Will not be detrimental or pose a danger to public health and safety.

2. Whenever an applicant for a variance alleges that he suffers or will suffer economic hardship by complying with the regulation, he must submit evidence demonstrating the costs of his compliance with the regulation. The Board will consider the evidence and determine whether those costs are unreasonable. (NAC 439.240)

Therefore, it is important for your variance request to be as complete as possible. It is your responsibility to attach documentation supportive of your variance request.

Statement of degree of risk of health the water runs through 2 Filters and
no one drinks it. We buy all our drinking water. We will
still be 70 feet away from septic and the leach line
runs in the opposite ~~direction~~ direction.

Please state in detail the circumstances or conditions which demonstrate that:

1. An exceptional and undue hardship results from a strict application of the Regulation:

ICid shut down the canal that Fed the reservoir that I got
my water from. Now I have no water. I only have 2 lot
50' x 130'. If I don't get a well my house is not liveable
or worth anything. I have lived here for 20 years

2. The variance, if granted, would not:

A. Cause substantial detriment to the public welfare.

and I will lose everything. The wells in Hazen are ~~not~~ drinkable water, so this water will be used for washing & flushing toilets not drinking. I also have filters under the house. EVEN IF I had 200 feet the water quality would not be good.

B. Impair substantially the purpose of the regulation from which the application seeks a variance.

IT WOULD NOT.

The bureau may require the following supporting documents to be submitted with and as a part of this application:

- ☒ 1. Legal description of property concerned _____
- ☒ 2. General area identification map _____
- ☒ 3. Plat map showing locations of all pertinent items and appurtenances _____
- ☐ N/A 4. Well log (if applicable) NOT DRILLED YET.
- ☐ 5. Applicable lab reports PENDING
- ☐ 6. Applicable engineering or construction/remodeling information _____
- ☐ 7. Other items (see following pages) _____

This application must be accompanied by evidence demonstrating the costs of your compliance with regulations or specific statutory standards. Your request will be placed on the Board of Health agenda 40 days or more after receipt in this office if accompanied by the required fee (NAC 439.210). The application

and supporting documentation will form the basis for the Health Division staff report and recommendation to the Board. Failure to respond to the above statements may cause the Board to deny consideration of the application at the requested Board meeting.

Please schedule this hearing as:

☒

The next regularly scheduled Board of Health meeting, regardless of location.

☐

The next scheduled meeting in Carson City.

☐

The next scheduled meeting in Las Vegas.

Signature:

Julie Scott

Printed Name:

Julie Scott

Title:

OWNER

Date:

5/11/11

**PLEASE MAKE YOUR CHECK OR MONEY ORDER PAYABLE TO:
NEVADA STATE HEALTH DIVISION AND RETURN THIS APPLICATION,
ALONG WITH THE REQUIRED FEE PURSUANT TO NAC 439.210, TO:**

Richard Whitley, MS, Administrator
Nevada State Health Division
4150 Technology Way, Suite 300
Carson City, NV 89706

(See the attached table to determine the appropriate fee)

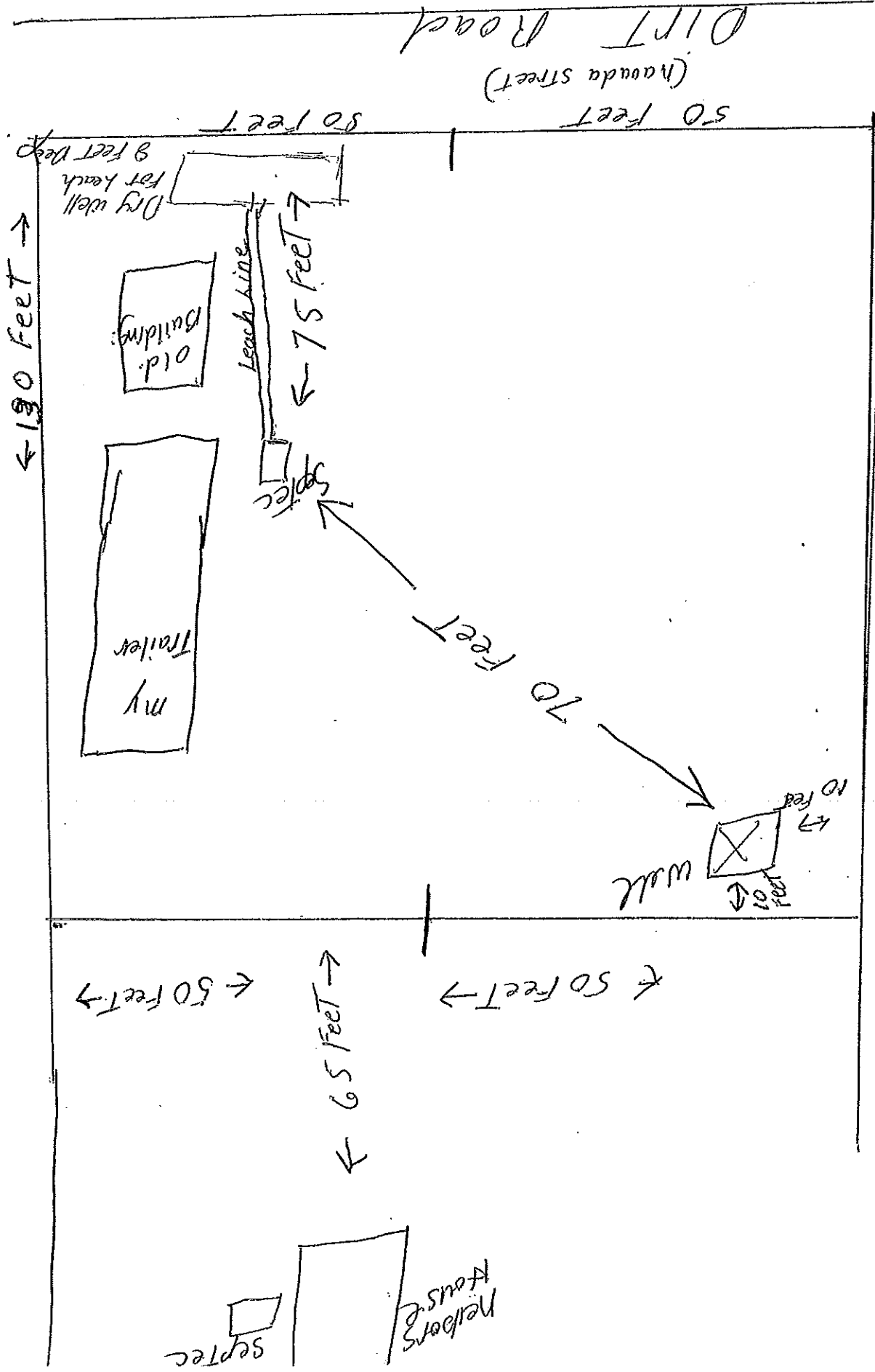
To calculate the appropriate fee to apply for a variance from the State Board of Health, please see the following table:

<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Carson City ▪ A property, facility or other entity or person in Lyon County ▪ A property, facility or other entity or person in Storey County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Nevada Appeal, is:</p>	\$222.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Churchill County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Lahontan Valley News, is:</p>	\$128.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Douglas County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Record Courier, is:</p>	\$135.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Clark County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Las Vegas Review Journal/Las Vegas Sun, is:</p>	\$237.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Mineral County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Mineral County Independent News, is:</p>	\$141.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Nye County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Pahrump Valley Times, is:</p>	\$ 98.00

<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Washoe County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Reno Gazette Journal, is:</p>	\$155.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Elko County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Elko Daily Free Press, is:</p>	\$107.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Eureka County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Eureka Sentinel, is:</p>	\$133.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in White Pine County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Ely Times, is:</p>	\$168.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Humboldt County ▪ A property, facility or other entity or person in Lander County ▪ A property, facility or other entity or person in Pershing County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Reno Gazette Journal is:</p>	\$155.00
<p>As of December 31, 2009, if the requested variance affects:</p> <ul style="list-style-type: none"> ▪ A property, facility or other entity or person in Esmeralda County ▪ A property, facility or other entity or person in Lincoln County <p>The fee to apply, based on the cost to publish the notice of the request for a variance in the Las Vegas Review Journal/Las Vegas Sun is:</p>	\$237.00

(Hozem Ave)

Dirt Road



NOTE: This plot is for assessment use only and does not represent survey. No liability is assumed as to the accuracy of the data recorded hereon. Use of this plot for other than assessment purposes is definitely not recommended and Churchill County expressly disclaims any liability for use other than for assessment purposes.

SOUTHERN PACIFIC COMPANY

NOTE: THIS PLAT IS INSERTED FOR REFERENCE PURPOSES ONLY AND IS NOT MADE A PART OF THIS TITLE EVIDENCE.

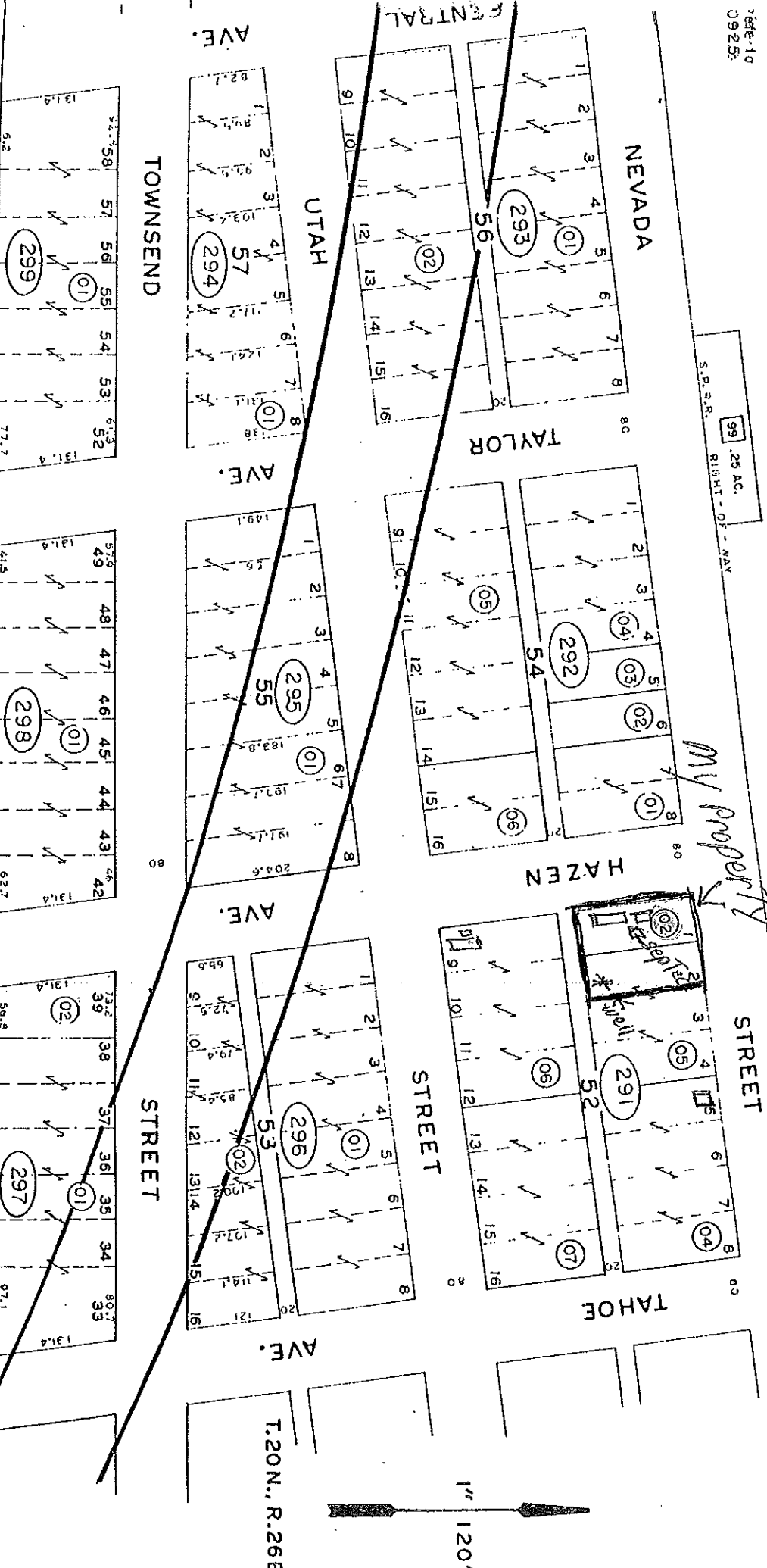
HAZEN

10-29

Ref: 10
0925:

39 .25 AC.
S.P. & R. RIGHT-OF-WAY

My property



63H

63G

63F

ALL LOTS ARE 50' X 130'
UNLESS NOTED

RENO HWY
U.S. 50 &
ALT. 9

NAC 444.790 Lot size. (NRS 439.200, 444.650)

1. A minimum area of 1 acre (43,560 square feet), including public streets and alleys or other public rights-of-way, lands or any portion thereof abutting on, running through or within a building site, is required for the installation of an individual sewage disposal system on a lot served by a well.

2. For a lot that is a part of a tentative map that is approved before January 1, 2000, a minimum area of 1/4 acre (10,890 square feet), including public streets or alleys or other public rights-of-way, lands or any portions thereof abutting on, running through or within a building site, is required for the installation of an individual sewage disposal system on a lot served by a community water supply.

3. For a lot that is part of a tentative map that is approved on or after January 1, 2000, a minimum area of 1/2 acre (21,780 square feet), including public streets or alleys or other public rights-of-way, lands or any portions thereof abutting on, running through or within a building site, is required for the installation of an individual sewage disposal system on a lot served by a community water supply.

[Bd. of Health, Indiv. Sewage Disposal Systems Reg. Note, eff. 1962; A and numbered as §§ 7.1-7.3, 11-23-72]—(NAC A 10-22-93; R129-98, 3-25-99; R100-07, 10-31-2007)

NAC 444.792 Location. (NRS 439.200, 444.650)

1. Except as otherwise provided in this section, an individual sewage disposal system must be located on the same lot as the building or structure that the system serves. The administrative authority may approve the use of a part of an abutting lot to provide additional space for an individual sewage disposal system or any part thereof, if the owner of the individual sewage disposal system can show:

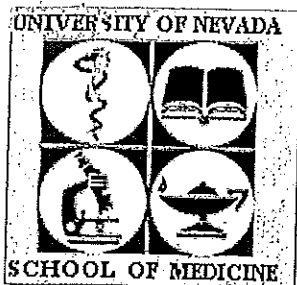
(a) Proper cause, including, without limitation, a legal right of the owner to use the abutting land as a result of a transfer of ownership of the abutting lot or an easement to use the abutting lot; and

(b) Use of the abutting lot for the individual sewage disposal system does not violate any other requirement of NAC 444.750 to 444.8396, inclusive.

2. The minimum horizontal separations that must be maintained between the perimeter of the components of an individual sewage disposal system and the following features are:

Minimum horizontal distance, in clear, required from:	Septic tank	Disposal field (shallow)
Building or structure	8'	8'
Property lines	10'	10'
Water supply wells (sealed to 50 feet)	100'	100'
Water supply wells (not sealed to 50 feet)	100'	150'
Public water supply wells	150'	150'
Streams or watercourses	100'	100'
Drainage channels	25'	25'
Large trees or shrubs	10'	10'
Disposal fields	5'	—
Community water main line	10'	25'
Individual water service line	10'	25'

[Bd. of Health, Indiv. Sewage Disposal Systems Reg. §§ 8.1-8.2.4 & Table 4, eff. 11-23-72 + Lot plan, eff. 1962; A and renumbered as Figure 1, 11-23-72]—(NAC A by R129-98, 3-25-99; R100-07, 10-31-2007)



NEVADA STATE HEALTH LABORATORY
University of Nevada School of Medicine
1660 North Virginia Street, Reno, NV 89503-1738
Phone: (775) 688-1335

WATER CHEMISTRY REPORT

STATUS: FINAL

Report To: Chemical quality meets the State of
Nevada drinking water standards. ✓
BW

COUNTRY EQUIPMENT
1010 CARPENTER RD
LOVELOCK, NV 89419

Circled items exceed State of
Nevada drinking water standards.
The items are:

ARSENIC

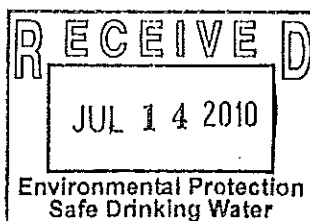
Accession Number: 224971
Sampled By: BILL GUNN
Date/Time Collected: 06/16/10 10:45
Date/Time Received: 06/17/10 11:04
Report Date and Time: 07/08/10 0:00

Analysis Type: SDWA
General Location: KITCHEN FAUCET
Source Address: 6820 RENO HWY
City: FALLON
State: NV
County: CHURCHILL

PWS ID:
Public Water System:

Township: Range: Section:

- ☐ For Compliance
☐ Not For Compliance
☒ Not Indicated



Test:	Method:	Results:	RL	MCL	Analysis Date:	Analyst:
ROUTINE DOMESTIC Panel						
Alkalinity as CaCO ₃	SM 2320 B	201 mg/L	20		06/22/10	Jfenn
Arsenic	EPA 200.8	200 ug/L	3	10	06/22/10	JRiviera
Barium	EPA 200.7	0.03 mg/L ✓	0.02	2	06/22/10	SRice
Bicarbonate	SM 2320 B	239 mg/L	25		06/22/10	Jfenn
Boron	EPA 200.7	0.5 mg/L	0.1		06/22/10	SRice
Calcium	EPA 200.7	17 mg/L	5		06/22/10	SRice
Carbonate	SM 2320 B	<12 mg/L	12		06/22/10	Jfenn
Chloride	EPA 300.0	18 mg/L ✓	5		06/18/10	Vmiller
Color	SM 2120 B	<5 CU ✓	5		07/07/10	Jfenn
Copper	EPA 200.7	<0.02 mg/L ✓	0.02		06/22/10	SRice
Electrical Conductivity	SM 2510	570 umhos/cm	10		06/22/10	Jfenn
Fluoride	EPA 300.0	0.8 mg/L ✓	0.1	4	06/18/10	Vmiller
Hardness	EPA 200.7	67 mg/L	33		06/22/10	SRice

P = Pending Result

RL = Reporting Limit

MCL = Maximum Contaminant Level

ND = Not Detected

NOTE: Results displayed in BOLD, ITALIC TYPE
have failed Nevada State health standards

NOTE: This document will be destroyed at NSHL after 12 years, unless Client requests otherwise.

Accession Number: 224971

Hydroxide	SM 2320 B	<7 mg/L	7	06/22/10	Jfenn
Iron	EPA 200.7	0.12 mg/L ✓	0.05	06/22/10	SRice
Magnesium	EPA 200.7	6 mg/L ✓	5	06/22/10	SRice
Manganese	EPA 200.7	<0.02 mg/L ✓	0.02	06/22/10	SRice
Nitrate+Nitrite as N	EPA 300.0	2.2 mg/L ✓	0.5	10 06/18/10	Vmiller
pH	SM 4500 H B	8.35 SU ✓		06/22/10	Jfenn
pH Temperature	SM 4500 H B	17.4 DegC		06/22/10	Jfenn
Potassium	EPA 200.7	12 mg/L	5	06/22/10	SRice
Silica	EPA 200.7	41 mg/L	1	06/22/10	SRice
Sodium	EPA 200.7	100 mg/L	5	06/22/10	SRice
Sulfate	EPA 300.0	53 mg/L ✓	5	06/18/10	Vmiller
Total Dissolved Solids	SM 2540 C	360 mg/L ✓	25	06/23/10	Jfenn
Turbidity	EPA 180.1	1 NTU ✓	0.4	07/07/10	Jfenn
Zinc	EPA 200.7	0.07 mg/L ✓	0.05	06/22/10	SRice

FOR LAB USE ONLY:

EPM: 0.2802

LSI: -0.21

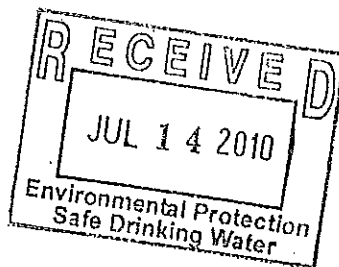
Calc TDS: 371

SAR: 5.3103

TDS/EC: 0.63

Approved By

Date



P = Pending Result

RL = Reporting Limit

MCL = Maximum Contaminant Level

ND = Not Detected

NOTE: Results displayed in BOLD, ITALIC TYPE
have failed Nevada State health standards

NOTE: This document will be destroyed at NSHL after 12 years, unless Client requests otherwise.

Arsenic

Basic Information

Arsenic occurs naturally in rocks and soil, water, air, and plants and animals. It can be further released into the environment through natural activities such as volcanic action, erosion of rocks and forest fires, or through human actions. Approximately 90 percent of industrial arsenic in the U.S. is currently used as a wood preservative, but arsenic is also used in paints, dyes, metals, drugs, soaps and semi-conductors. High arsenic levels can also come from certain fertilizers and animal feeding operations. Industry practices such as copper smelting, mining and coal burning also contribute to arsenic in our environment.

Higher levels of arsenic tend to be found more in ground water sources of drinking water. The demand on ground water from municipal systems and private drinking water wells may cause water levels to drop and release arsenic from rock formations. Compared to the rest of the United States, western states have more systems with arsenic levels greater than EPA's drinking water standard of 10 parts per billion (ppb).

What are Arsenic's health effects?

Human exposure to arsenic can cause both short and long term health effects. Short or acute effects can occur within hours or days of exposure. Long or chronic effects occur over many years. Long term exposure to arsenic has been linked to cancer of the bladder, lungs, skin, kidneys, nasal passages, liver and prostate. Short term exposure to high doses of arsenic can cause other adverse health effects, but such effects are unlikely to occur from U.S. public water supplies that are in compliance with the arsenic standard.

If you are looking for more information about health effects, you can also visit the Center for Disease Control's arsenic website at <http://www.atsdr.cdc.gov/csem/arsenic/>

How can arsenic be removed from my drinking water?

The following treatment method(s) have proven to be effective for removing arsenic to below the MCLs for very small systems: ion exchange, reverse osmosis.

NDEP Note: Additional testing will likely be necessary to determine the type of arsenic in the water source. Homeowners are encouraged to contact the NDEP, Bureau of Safe Drinking Water for additional information and assistance. While Reverse Osmosis treatment units can be readily purchased from home improvement stores, the NDEP also encourages homeowners to contact a licensed plumber regarding proper installation and understand proper maintenance requirements to ensure effective arsenic removal.

Where can I get more information about drinking water and private wells?
<http://www.epa.gov/safewater/privatewells/index2.html>

Information excerpted from the US EPA web pages at:
<http://www.epa.gov/safewater/arsenic/basicinformation.html> and
<http://www.epa.gov/safewater/privatewells/index2.html>